AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all previous versions, and listing, of claims in this application.

1.(Previously Presented) A method comprising:

encoding data bits represented by multi-level analog signals comprising more than two analog amplitude levels;

transmitting the encoded data bits over at least two multi-level signal buses between a transmitter and a receiver such that, on each multi-level signal bus, during each data bit period the signal level is required to change from a first signal level to a second, different signal level; and

indicating a data boundary to the receiver by holding one of the multi-level signal buses at the same level for at least two consecutive bit periods, wherein the data boundary comprises one of a start or an end of a multi-bit frame.

2.(Previously Presented) The method as in claim 1, where encoding includes, when a data bit to be encoded is the same as the data bit encoded for an immediately prior bit period, encoding instead a strobe signal represented by a predetermined one of the levels of the multi-level analog signal, where the presence of the strobe signal at the receiver is used to generate a clock edge.

3.(Previously Presented) The method as in claim 2, where the multi-level analog signal comprises a 3-level pulse amplitude modulation signal, where two analog signal levels convey the encoded data bits and a third analog signal level conveys the strobe signal.

4. (Canceled)

5.(Previously Presented) The method as in claim 1, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between the transmitter and the receiver.

6.(Previously Presented) The method as in claim 1, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a control unit of a mobile station and a display of the mobile station.

7.(Previously Presented) The method as in claim 1, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a control unit of a mobile station and a camera of the mobile station.

8.(Previously Presented) The method as in claim 1, further comprising transmitting a stream of data between the transmitter and the receiver by toggling one of the at least two multi-level signal buses between first and second signal levels to generate clock edges, and setting, so as to coincide with a generated clock edge, a signal level of another one of the at least two multi-level signal buses at a signal level representative of a logic zero signal level or a logic one signal level.

9.(Previously Presented) The method as in claim 8, where the receiver of the stream of data performs toggling the one of the at least two multi-level signal buses between the first and the second signal levels to generate clock edges.

10. .(Previously Presented) The method as in claim 8, where a beginning and an end of the stream of data is signaled by setting at least one of the different signal buses to a third signal level.

11.(Previously Presented) An apparatus comprising:

a transmitter configured to encode data bits represented by multi-level analog signals comprising more than two analog amplitude levels;

at least two multi-level signal buses coupled between said transmitter and a receiver configured to convey the encoded data bits such that, on each multi-level signal bus, during each data bit period the signal level is required to change from a first signal level to a second, different signal level; and

said transmitter configured to indicate a data boundary to said receiver by holding one of the multi-level signal buses at the same level for at least two consecutive bit periods, wherein the data boundary comprises one of a start or an end of a multi-bit frame.

12.(Previously Presented) The apparatus as in claim 11, where said transmitter operates to encode data bits such that, when a data bit to be encoded is the same as the data bit encoded for an immediately prior bit period, the transmitter instead encodes a strobe signal represented by a predetermined one of the levels of the multi-level analog signal, where the presence of the strobe signal at said receiver is used to generate a clock edge.

13.(Previously Presented) The apparatus as in claim 12, where the multi-level analog signal comprises a 3-level pulse amplitude modulation signal, where two analog signal levels convey the encoded data bits and a third analog signal level conveys the strobe signal.

14. (Canceled)

15.(Previously Presented) The apparatus as in claim 11, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between said transmitter and said receiver.

16.(Previously Presented) The apparatus as in claim 11, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a control unit of a mobile station and a display of the mobile station.

17.(Previously Presented) The apparatus as in claim 11, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a control unit of a mobile station and a camera of the mobile station.

18.(Previously Presented) The apparatus as in claim 11, where said transmitter and said receiver cooperate to transmit a stream of data by toggling one of the at least two multi-level signal buses between first and second signal levels to generate clock edges, and by setting, so as

to coincide with a generated clock edge, a signal level of another one of the at least two multi-level signal buses at a signal level representative of a logic zero signal level or a logic one signal level.

19.(Previously Presented) The apparatus as in claim 18, where said receiver of the stream of data toggles the one of the at least two multi-level signal buses between the first and the second signal levels to generate clock edges.

20.(Previously Presented) The apparatus as in claim 18, where a beginning and an end of the stream of data is signaled by setting at least one of the different signal buses to a third signal level.

21.(Currently Amended) A mobile station comprising:

a plurality of sub-assemblies coupled together by a plurality of data communication buses connected to ports, where at least one port comprises a multi-level analog signaling circuit arrangement comprising a transmitter to encode data bits represented by multi-level analog signals comprising more than two analog amplitude levels;

where one of the plurality of data ~~communications bus~~ communication buses that couples the transmitter to a receiver in another port comprises at least two multi-level signal buses for conveying the encoded data bits such that, on each multi-level signal bus, during each data bit period the signal level is required to change from a first signal level to a second, different signal level; and

said transmitter indicating a data boundary to said receiver by holding one of the multi-level signal buses of the at least two multi-level signal buses at the same level for at least two consecutive bit periods, wherein the data boundary comprises one of a start or an end of a multi-bit frame.

22.(Previously Presented) The mobile station as in claim 21, where said transmitter operates to encode data bits such that, when a data bit to be encoded is the same as the data bit encoded for an immediately prior bit period, the transmitter instead encodes a strobe signal represented by

a predetermined one of the levels of the multi-level analog signal, where the presence of the strobe signal at said receiver is used to generate a clock edge.

23.(Previously Presented) The mobile station as in claim 22, where the multi-level analog signal comprises a 3-level pulse amplitude modulation signal, where two analog signal levels convey the encoded data bits and a third analog signal level conveys the strobe signal.

24. (Canceled)

25.(Previously Presented) The mobile station as in claim 21, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between said transmitter and said receiver.

26.(Previously Presented) The mobile station as in claim 21, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a cellular engine of said mobile station and a display of said mobile station.

27.(Previously Presented) The mobile station as in claim 21, where the multi-bit frame comprises at least 24 bits for conveying 8-bit Red, Green and Blue data between a cellular engine of said mobile station and a camera of said mobile station.

28.(Previously Presented) The mobile station as in claim 21, where said transmitter and said receiver cooperate to transmit a stream of data by toggling one of the at least two multi-level signal buses between first and second signal levels to generate clock edges, and by setting, so as to coincide with a generated clock edge, a signal level of another one of the at least two multi-level signal buses at a signal level representative of a logic zero signal level or a logic one signal level.

29.(Previously Presented) The mobile station as in claim 28, where said receiver of the stream of data toggles the one of the at least two multi-level signal buses between the first and the second signal levels to generate clock edges.

30.(Previously Presented) The mobile station as in claim 28, where a beginning and an end of the stream of data is signaled by setting at least one of the different signal buses to a third signal level.

31.(Previously Presented) The mobile station as in claim 21, where one of said sub-assemblies comprises a cellular engine that is coupled to circuitry external to said mobile station via another port and data communications bus.

32.(Previously Presented) Circuitry comprising:

a transmitter configured to encode data bits represented by multi-level analog signals comprising more than two analog amplitude levels;

at least two multi-level signal buses configured to interface between said transmitter and a receiver configured to convey the encoded data bits such that, on each multi-level signal bus, during each data bit period the signal level is required to change from a first signal level to a second, different signal level; said transmitter configured to indicate a data boundary to said receiver means by holding one of the multi-level signal buses at the same level for at least two consecutive bit periods, wherein the data boundary comprises one of a start or an end of a multi-bit frame.

33.(Previously Presented) The circuitry as in claim 32, where the transmitter is configured to encode the data bits such that, when a data bit to be encoded is the same as the data bit encoded for an immediately prior bit period, said transmitter encodes a strobe signal represented by a predetermined one of the levels of the multi-level analog signal, where the presence of the strobe signal at said receiver is used to generate a clock edge.

34.(Previously Presented) The circuitry as in claim 33, where the multi-level analog signal comprises a 3-level pulse amplitude modulation signal, where two analog signal levels convey the encoded data bits and a third analog signal level conveys the strobe signal.

35.(Previously Presented) An apparatus comprising:

encoding means for encoding data bits represented by multi-level analog signals comprising more than two analog amplitude levels; and

at least two multi-level signal bus means between said encoding means and receiver means for conveying the encoded data bits such that, on each multi-level signal bus, during each data bit period the signal level is required to change from a first signal level to a second, different signal level;

where said encoding means is for indicating a data boundary to said receiver means by holding one of the multi-level signal buses at the same level for at least two consecutive bit periods, wherein the data boundary comprises one of a start or an end of a multi-bit frame.